REMARKS

The Office Action dated February 3, 2005, and the Advisory Action dated May 23, 2005, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted with the filing of a Request for Continued Examination (RCE).

Further to amendments as submitted on May 3, 2005, claims 9, 11, 12 and 13 are amended. Claim 10 is canceled without prejudice. No new matter is added. Support for the amendments may be found throughout the specification, for example, on page 6, lines 5-20, and page 9, line 31 to page 10, line 7. Thus, claims 2-7, 9 and 11-13 are pending in the present application, and are respectfully submitted for consideration.

Claims 2-7, 9 and 11-13 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,570,856 (Freeburg et al.) in view of U.S. Patent No. 5,953,336 (Moore et al.). The Office Action took the position that Freeburg taught all the elements of the claims, except "reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a radio transceiver device of said radio access network and the information related to the transmission resources required for handling real time traffic by said radio transceiver." The Office Action then alleged that Moore taught those elements of the claims missing from Freeburg. Applicants respectfully submit that the cited references of Freeburg and Moore, either alone or in combination, fail to disclose or suggest all the features of any of the presently pending claims.

Claim 9, upon which claims 2-7 are dependent, recites a method for controlling transmission resources of a radio access network adapted to transmit data packets in real time traffic and in non-real time traffic. The method includes obtaining information related to transmission resources required for handling real time traffic in a radio network controller. The method also includes reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a respective radio transceiver device of the radio access network and the information related to the transmission resources required for handling real time traffic by the respective radio transceiver. The respectively reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers. The reserving step preselects the transmission resources for the respective radio transceiver device. The method also includes transmitting prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled.

Claim 11 recites a radio access network control device configured to obtain information related to transmission resources required for handling real time traffic in a radio network controller. The radio access network control device also is configured to reserve transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a respective radio transceiver device of the radio access network and the information related to the transmission

resources required for handling real time traffic by the respective radio transceiver. The respectively reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers and reserved by preselecting transmission resources for the respective radio transceiver device. The radio access network control device also is configured to transmit prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled.

Claim 12 recites a radio network control device. The radio network control device includes obtaining means for obtaining information related to transmission resources required for handling real time traffic in a radio network controller. The radio network control device also includes reserving means for reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a respective radio transceiver device of the radio access network and the information related to the transmission resources required for handling real time traffic by the respective radio transceiver. The respectively reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers. The radio network control device also includes transmitting means for transmitting resources for the respective radio transceiver device and to transmit prevailing traffic based on an identity of the traffic to be handled by selectively

addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled.

Claim 13 recites a radio transceiver device. The radio transceiver device is configured to receive, from a radio access network control device, information relating to reserved transmission resources for handling non-real time traffic and for handling real time traffic. The respectively reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers. The radio transceiver device also is configured to use the reserved transmission resources for transmission, based on the ATM virtual path identifiers and virtual channel identifiers, by allocating respective traffic to corresponding channel elements distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers. The radio transceiver device also is configured to reserve by preselecting transmission resources for the respective radio transceiver device. The radio transceiver device also is configured to transmit prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled.

As discussed in the specification, examples of the present invention enable the removal of a need for heavy channel activation signaling on slow control channels before each channel allocation procedure. For example, the base station and the radio network controller (RNC) know about the resources that may be used for non-real time traffic such that resources may not need to be reserved on a per bearer basis. Thus, virtual

channels also may not have to be reserved on a per bearer basis. Applicants respectfully submit that the cited references fail to disclose or suggest the elements of any of the presently pending claims. Therefore, the cited references fail to provide the critical and unobvious advantages discussed above.

Freeburg relates to a method of handoff between base stations in a wireless communications system. Freeburg describes the controlling of handoff resources, or switching between communication paths/communication legs. In connection with the handoff, Freeburg describes the use of ATM connections, such that real time and non-real time service categories are carried. Freeburg also describes that ATM uses virtual channel connections (VCCs) or virtual path connections (VPCs). Referring to Figure 14 of Freeburg, a mobile station 30 is shown. A cell stream 700 is shown that is the activity in real time on the downlink of the first ATM radio channel 31. In Figure 14, bursts 706 and 715 contain cells having the same VPI and VCI (connection A) and bursts 703, 704, 712 and 713 contain cells having another VPI and VCI (connection B). Cell stream 720 also is shown as the activity in real time on the downlink of the second ATM radio channel 32. Bursts 726 and 735 show another independent connection on the channel (connection C). Thus, Freeburg describes using the VPI's/VCI's to distinguish the respective connections A, B and C.

Moore relates to a method and apparatus for source rate pacing in an ATM network. Moore describes scheduling the transmission of cells onto an ATM, or other packet switching, network. A timing ring contains entries dynamically allocated for the

transmission of packets in virtual circuits. An entry on the timing ring represents an available time slot for transmission of a single cell or packet. When a dynamically allocated entry for a particular virtual circuit is processed, the next transmission of a packet on that virtual circuit is scheduled by dynamically allocating another entry on the timing ring. The timing ring also contains entries statically preallocated for the transmission of packets of other virtual circuits, typically CBR and real-time VBR circuits. Referring to Figure 4 of Moore, a flow diagram for the processing of ring entries on timing ring 300 is shown. Microprocessor 120 reads both a static field and a dynamic field of the current ring entry 305. Microprocessor 120 first checks the dynamic field 320 to determine if it contains a pointer to a queue of dynamic actions that have not become current. If so, microprocessor 120 moves to block 430, where the entire queue of dynamic actions is placed into another data structure, known as the Latent Queue, because dynamic actions are only processed from the Latent Queue. A dynamic action's presence on timing ring 300 indicates the moment at which that action may be moved to the Latent Queue and enabled for processing.

Applicants submit that Freeburg and Moore, either alone or in combination, fail to disclose or suggest all the features of any of the presently pending claims. For example, Freeburg and Moore fail to disclose or suggest that the reserving preselects transmission resources for a respective radio transceiver device and transmitting prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time, i.e., non-real time

traffic to be handled. Neither Freeburg nor Moore disclose or suggest that the preselected resources are to be used without channel reservation signaling due to being preselected for a respective base station. Applicants submit that the routing of packets and the scheduling of packets is distinguishable from resource reservation for packets. Freeburg and Moore describe resources for non-real time traffic being reserved on a bearer basis because there was a channel request, and the resources being selected by channel activation signaling. Freeburg and Moore, however, fail to disclose or suggest that the resources for non-real time traffic are selected beforehand by estimating how much resources the base station is going to need for real time traffic. Thus, channel activation signaling may be avoided. Freeburg and Moore fail to disclose or suggest these features.

Applicants submit that Freeburg fails to disclose or suggest reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources and the information related to the transmission resources required for handling real time traffic. Applicants maintain that Freeburg does not describe resource partitioning in terms of swapping resources between real time and non-real time services. Instead, Freeburg states "for real time service categories, the logic unit 520 and processor 530... control the rate R at which ATM cells are transferred across interface 535," and "if ATM cells arrive at the logic unit at a rate faster than R, then the cells are stored in FIFO 540 (or in RAM 531) until they are able to be consumed at the interface 535." Freeburg, column 15, lines 3-11. In other words, applicants state that Freeburg describes that the real time transmission resources, once they are allocated,

are not expanded by cutting non-real time resources, but that an excess demand for real time transmission is buffered and transmitted only upon subsequent resource availability.

Further, applicants submit that Moore fails to disclose or suggest those features of the claims missing from Freeburg. For example, applicants submit that Moore describes controlling transmission resources by controlling available bandwidth. For example, Moore describes that a CBR virtual circuit is granted a permanent allocation of bandwidth, and a VBR has an average bandwidth, whereas ABR virtual circuits have a defined bandwidth range. Applicants maintain that Moore fails to disclose or suggest that any of the bandwidth is reserved dynamically. Thus, applicants assert that Moore fails to disclose or suggest reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources and the information related to the real time/non-real time traffic to be handled..

In contrast, claim 9 recites "wherein the reserving step preselects the transmission resources for the respective radio transceiver device" and "transmitting prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled." Claim 11 recites "reserved by preselecting the transmission resources for the respective radio transceiver device" and "to transmit prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled." Claim 12 recites "transmitting means for transmitting resources

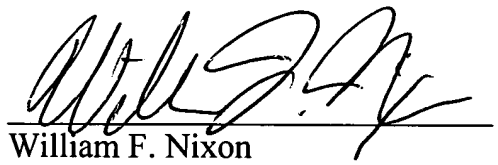
for the respective radio transceiver device, and to transmit prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled." Claim 13 recites "reserve by preselecting the transmission resources for the respective radio transceiver device" and "transmit prevailing traffic based on an identity of the traffic to be handled by selectively addressing the ATM virtual path identifiers and virtual channel identifiers for the real time/non-real time traffic to be handled." Applicants respectfully submit, for the reasons given above, that Freeburg and Moore fail to disclose or suggest at least these features of the presently pending claims.

With regard to the dependent claims, these claims are distinguishable over the cited references for at least the reasons discussed above, and because the dependent claims also include additional patentable subject matter. Specifically, the cited references fail to disclose or suggest all the features of claims 2-7. Thus, for at least these reasons, applicants respectfully submit that the cited references fail to disclose or suggest all the features of claims 2-7, 9 and 11-13. Applicants respectfully request that the obviousness rejection be withdrawn. Therefore, applicants respectfully request that claims 2-7, 9 and 11-13 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosure: Request for Continued Examination (RCE)
Petition for Extension of Time

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